



Figure 1. Snowfall recorded between 1994 and mid-1998 at Kaza, Spiti, Indian trans-Himalaya

until the afternoon of 12 June, when about 45 cm had fallen. On the morning of 11 June, Homed Larks started flocking, after apparently having abandoned their nests. At least two flocks of between 100 and 150 birds were observed, but no singles or pairs were to be found. However, as soon as the snow melted on 13 June, the birds reverted back to pairs, the characteristic social structure for the season. They presumably nested again, as indicated by the presence of at least a few fledglings later in the season.

What could be the reason for this temporary, unusual change in social structure? The burial of the nests in snow and subsequent abandonment presumably must have initiated the flocking. Is it plausible that the presence of snow cover initiates post-breeding altitudinal movements in the species? Did the heavy snowfall, together with nest abandonment, activate a pre-migratory response? Had the snow cover lasted much longer, would this flocking have culminated in movement away from the area? Or is it simply that the birds temporarily flocked in patches of relatively greater

food availability or where the weather conditions were less inclement?

Whether any other migratory species in the area displayed such flocking behaviour is not known. Observations on the Homed Lark were facilitated by its rather ubiquitous presence, including around human habitation. On a 5 km trek through the snow during this period, single individuals and pairs of the Black Redstart *Phoenicurus ochruros*, Tibetan Snowfinch *Montifringilla adamsi* and Rock Bunting *Emberiza cia* were observed. However, the nests of these species are better protected than those of the Homed Lark, either in cavities between rocks (Black Redstart and Tibetan Snow Finch, pers. obs.), or in a sheltered site, e.g. a shrub thicket in the case of the Rock Bunting (Ali and Ripley 1987). Thus, while this observation of unusual flocking in the Homed Lark succeeds only in raising some questions, it nevertheless indicates that small, open ground nesting species are likely to be especially vulnerable to such climatic singularities.

I observed this unusual event while conducting research on grazing dynamics in the trans-Himalaya, financed by the Netherlands Foundation for the Advancement of Tropical Research (WOTRO), a body residing under the Netherlands Organization for Scientific Research (NWO). The 1996 observations were made while I was funded by the Wildlife Conservation Society (WCS), New York, through the WCS India Program. My gratitude to the Himachal Pradesh Forest Department for permission to work in the area.

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Cronism in the Forest Owlet *Athene blewitti*

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Until its rediscovery in November 1997 by P. C. Rasmussen and her colleagues (King and Rasmussen 1997) near Shahada, Maharashtra, India, the Forest Owlet *Athene blewitti* was almost unknown in life. Lack of information on the basic biology and ecology, status and distribution of this Indian endemic species led to a survey starting in June 1998 in which the first vocalizations were recorded and some preliminary behavioural observations made (Rasmussen and Ishtiaq

1999). Since then, we have collected information on the breeding biology, foraging behaviour and vocalizations, which will be discussed in separate papers. Here we report on cronism in the Forest Owlet.

In October 1998, we found a pair engaged in courtship and display and followed them for several days, until they had selected a nest hole. The nest was then monitored throughout the breeding season. Two chicks hatched in December and, 10 days after hatching, they

gave begging calls to elicit food from their mother. The age difference between the two chicks was not ascertained but, when they started peeping out through the nest hole from 20 days onwards, one chick had facial markings just like that of an adult, while the other, which appeared less frequently at the hole, was smaller and had greyish down.

On 10 January 1999, a male (father?) Forest Owlet was found feeding on a dead chick on a tree near the nest-site. The chick was very small compared to the other one that had emerged from the nest a few days earlier. The event was videotaped and photographed. One wing of the dead chick was salvaged and is now in the Bombay Natural History Society collection.

The next day, the other, larger juvenile (nearly 40 days old) was watched for the whole day. The chick kept emitting *kee...k, kee...k* begging calls for food. These calls were similar to those made by the mother to elicit food from the male during incubation and after hatching of the eggs. The mother came in the afternoon of 11 January to feed the juvenile, but the latter continued calling even after receiving the food. Later in the evening, just at sunset (18h05), the female went into the nest, giving a begging-type call to the juvenile, as if summoning it to go to roost. The reluctant juvenile kept calling from a tree and the mother again went to search for food.

At 18h30, a male Forest Owlet chased the surviving bigger juvenile, which was constantly calling for food near the nesting tree. We could not see the whole event properly but the juvenile began to give a distress call *ke kh...kh*, and we suspect that it had been caught by the male owlet. A few minutes later a low *oh...ow* call was heard, similar to a call that the male had given while feeding on the smaller sibling the previous day.

After 18h30 it had become dark, but we kept waiting near the nest hole to try to detect further calls or movement; however, by 19h30 we had not heard anything from the owls. Next morning, at 03h30, we returned to the site to look for the remaining juvenile. Previously, the juveniles had usually started calling from the nest by 05h00, but we heard nothing until 06h30. Then the mother called *keek* near the nesting tree, as she normally did in the morning to elicit food from the male for herself or for the chicks. The mother kept flying from one tree to another, making short flights in the surrounding area and at 09h00 she went to forage near the nesting site. A thorough search for the juvenile finally resulted in the discovery at 14h00 of the tail and wing feathers, under the teak tree where it had been seen calling, after being chased by the male on the previous evening. This indicated that this juvenile had fallen prey to the male owlet. The male had probably caught it on the nesting tree and later brought it back to its usual perch and consumed it there. There are several reasons to suspect that the second juvenile was also eaten by the male, despite the fact that we were not able to see the whole series of events due to lack of light. We do not have any direct evidence to prove this as the birds were unmarked.

During the incubation period, the male used to roost with the female inside the nest hole but, as soon as the chick hatched, he was kept away from the nest by the female. The male never fed the chicks directly in the nest. He always brought food to the female, which used

to call close to the nest and then feed the chicks after taking the food from him. On one occasion the male was noted perching at the nest entrance in the absence of his mate; however, the female soon appeared and chased the male away from the tree.

The day before this incident of cronism, the male had brought a lizard *Calotes* to the teak tree. The juvenile, which was sitting in the lower canopy under foliage, started giving begging calls *keek... keek*. The male flew to the top of the same tree and gave one *kee...yah* call (the characteristic call given by the male in the female's absence), whereupon the juvenile immediately stopped calling. The female approached the male, giving begging calls, and took the lizard. The male remained near the female, but she did not allow him to stay and he flew out of sight. Soon after that, the female took the lizard to the juvenile, which started calling. This sequence of events suggests that the male wanted to mate and rear another brood. In order to do this the juveniles would have to be removed so that the adults would be able to start breeding again.

Alternatively, it is possible that the father of the two chicks might have died or left the territory with the arrival of another dominant male. If a replacement male had occupied the territory he may have eaten the chicks of his predecessor.

Cronistic behaviour has been reported in other owl species. Kumar (1980) conducted a study on the Spotted Owlet *Athene brama* for seven years in Andhra Pradesh, India and observed similar behaviour. Kumar (1980) was not able to distinguish the male and female of the species except for the minor size difference between the two sexes. We were able to distinguish male and female Forest Owlets by the size difference, as well as by markings on the belly. The female was slightly larger than the male and had obvious markings on the breast, while the male had a cleaner, whiter breast. This variation in markings was observed in two pairs but cannot be generalized for all Forest Owlets.

Size dimorphism between the sexes of Strigiformes has been demonstrated as a strategy to deter predation by males of their own chicks (Earhart and Johnson 1970), and a method for resource partitioning among males and females occupying the same habitat.

Detailed studies on the Forest Owlet are required, preferably on marked birds, to study breeding ecology and resource partitioning.

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Pallid Harrier *Circus macrourus*: the first record for Peninsular Malaysia

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At High Pines, Fraser's Hill, Pahang (altitude 1,320 m) on 2 April 1999 at 18h30, a very pale, adult male harrier *Circus* was seen flying from south to north and passed directly overhead. The bird was obviously on migration and flew with strong regular wing beats displaying a buoyant flight. When first seen it was a considerable distance away but, as the gap decreased, it became clear that this was a very pale bird of prey. The immediate reaction was that this was a small, lightly built harrier with an elegant shape, narrow wings and a long tail. When passing directly overhead at about an altitude of 70 m the yellow legs and black central primaries could be clearly seen. Apart from that, the underparts were very pale, appearing uniformly white, with the exception of very fine barring on the underwing. There was no contrast between the head and throat and the rest of the underbody. As the setting sun was low on the horizon and the weather was bright and clear the light conditions were perfect for observation. The bird was flying with its primaries spread which showed the black central primary feathers to advantage. The little that was seen of the upperwing showed a uniform pale grey with black central primaries. The bird had a dark eye and a pale bill. While still overhead it was independently identified by both observers as a male Pallid Harrier.

Harriers known to overwinter in Peninsular Malaysia are:-

1. Eastern Marsh Harrier *C. aeruginosus spilonotus*, which is the largest and most common species (Wells 1999). This harrier has broader wings and a more protruding head than the other species. The adult male has a broad black mask, a black-streaked breast, and a grey tail, while the underwing shows rufous bars on the secondaries and black-barred primaries on white underparts.
2. Hen Harrier *C. cyaneus* which is a vagrant (Wells 1999). The adult male has a grey head and upper breast, proportionally wider wings with 'dipped in ink' wingtips, a dark trailing edge to the underwing,

and a grey undertail. These features contrast with the rest of the white underparts and underwing.

3. Pied Harrier *C. melanoleucos* is less common than the Eastern Marsh Harrier and the adult male has a black head, upper breast, and wingtips.

All of these birds are familiar to the observers and none of them matches the description of the bird that we saw.

The Pallid Harrier is a long distance migrant and the majority of birds winter in the Indian subcontinent and Myanmar (Burma), and Ethiopian Africa (Cramp 1980). As a winter visitor to Burma it is not uncommon in the plains of southern Burma, and has also been recorded from the southern Shan States and Arakan, where it is common and arrives in November (Smythies 1986). The only other record from South-East Asia is an old record from east Tonkin, Vietnam (Robson 2000). Geographically, it is at least as likely to occur in Peninsular Malaysia as Hen Harrier (Wells 1999). The peak of the return spring migration is from mid-March to mid-April and consists largely of single birds (Cramp 1980). Although the appearance of this species is unexpected, circumstantial evidence strongly suggests that it is by no means inconceivable.

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